We claim:

1. A device for delivering electrical energy to a wall of a lumen, comprising:

a non-conductive catheter sized for introduction into the lumen; and

a conductive member capable of conducting an electrical signal, wherein the conductive member is contained within the catheter, the conductive member is movable between a non-deployed position within the catheter and a deployed position in which the conductive member is advanced longitudinally through and out of the catheter, wherein the conductive member substantially conforms to the wall of the lumen when the conductive member is in the deployed position.

2. The device of claim 1, wherein the conductive member in the non-deployed position slides within the catheter and, in the deployed position, assumes a preformed envelope external to the catheter, the envelope having first and second ends, wherein the envelope tapers towards the first and second ends.

3. The device of claim 2, wherein the catheter in the deployed position is a helix that expands to an enlarged central diameter that is greater than a proximal diameter of the helix at the catheter or a distal diameter of the helix at a distal end of the conductive member.

4. The device of claim 2, wherein the conductive member in the non-deployed position is substantially linear and, in the deployed position, assumes a substantially helical shape.

5. The device of claim 4, wherein the conductive member comprises a memory material that assumes the substantially helical shape when the conductive member is advanced out of the catheter.

6. The device of claim 2, further comprising a side port defined by the catheter through which side port the conductive member is advanced.

7. The device of claim 2, wherein the conductive member comprises an expandable distal end portion that is retracted in the non-deployed position and is expanded in the deployed position.

8. The device of claim 7, wherein the expandable distal end portion comprises a plurality of struts, each strut having a first end and a second end, that extend longitudinally with respect to the conductive member and are attached to the conductive member such that longitudinal movement of the conductive member moves the struts between the retracted and expanded positions.

9. The device of claim 8, wherein the first ends of the struts are coupled to a first portion of the conductive member and the second ends of the struts are slideably coupled to a second portion of the conductive member spaced apart from said first portion, such that longitudinal movement of the conductive member moves the first and second ends of the struts towards or away from each other.

10. The device of claim 9, wherein the first ends of the struts are coupled adjacent to a distal convergence point and the second ends of the struts are slideably coupled adjacent to a proximal convergence point.

11. The device of claim 10, further comprising a sheath around the conductive member, the sheath comprising the proximal convergence point and wherein retraction of the conductive member through the sheath moves the struts into the expanded position.

12. The device of claim 1, further comprising an expandable cuff around the catheter proximal to the conductive member.

13. The device of claim 1, wherein the conductive member is an electrically conductive liquid.

14. The device of claim 13, further comprising a plurality of ports in the catheter through which the liquid is deployed against the wall of the lumen.

15. The device of claim 14, wherein the plurality of ports are arranged peripherally around the catheter near a distal tip of the catheter.

16. The device of claim 13, further comprising a source of the conductive liquid in communication with the catheter and a pressure source capable of selectively moving the liquid through the catheter.

17. The device of claim 1, further comprising a source of electrical energy selectively in contact with the conductive member.

18. The device of claim 17, wherein the source of electrical energy is radiofrequency energy.

19. The device of claim 1, wherein the catheter is sized for insertion into a blood vessel.

20. A device for delivering electrical energy to a wall of a blood vessel, comprising:

a nonconductive catheter for introduction into a lumen of a blood vessel, the catheter defining an internal catheter lumen in communication with a side port;

a conductive wire that extends at least partially through the catheter lumen, wherein the wire comprises a memory material, and wherein the wire assumes a non-helical shape when the wire is inside the catheter and, when advanced outside the catheter through the side port, assumes a substantially helical shape.

21. The device of claim 20, wherein the wire assumes a substantially helical shape that substantially conforms to the walls of the blood vessel lumen when the wire is advanced outside the catheter.

22. The device of claim 20, wherein the substantially helical shape defines an envelope having first and second tapered ends.

23. The device of claim 20, further comprising a source of radiofrequency energy selectively in contact with the wire.

24. A device for delivering electrical energy to a wall of a body lumen, comprising:

a non-conductive catheter sized for introduction into a body lumen, the catheter defining an internal catheter lumen;

a conductive wire extending at least partially through the internal lumen of the catheter, wherein the wire has a proximal portion for advancing the wire through the catheter and a distal portion that is radially expandable to contact the walls of the body lumen, wherein a plurality of longitudinally extending radially expandable struts are located at the distal portion and, by longitudinal movement of the wire, the struts move between from retracted position to an expanded position, the struts capable of contacting the walls of the body lumen in the expanded position.

25. The device of claim 24, wherein the struts extend longitudinally along the conductive wire, each strut has a first end and a second end, the first ends of the struts are coupled to the conductive wire adjacent its distal end, the second ends of the struts are coupled to a fixation member that is selectively fixed relative to the wire, such that relative movement between the conductive wire and fixation member retracts and expands the struts.

26. The device of claim 25, wherein the fixation member comprises a sheath or ring around the conductive wire and the second ends of the struts are attached to the sheath.

27. A device for delivering electrical energy to a wall of a body lumen, comprising:

a catheter sized for introduction into a body lumen, the catheter defining a catheter lumen in communication with a plurality of fluid orifices;

a source of biocompatible electrically conductive liquid in selective fluid communication with the catheter lumen and a pressure source capable of selectively moving the conductive liquid though the catheter lumen and out of the fluid orifices into contact with the wall of the body lumen; and

a source of electrical energy selectively in contact with the liquid to conduct electrical energy through the liquid.

28. The device of claim 27, wherein the conductive liquid is hypertonic saline.

29. The device of claim 27, wherein the source of electrical energy is radiofrequency energy.

30. A method of applying electrical energy to a wall of a body lumen, comprising:

introducing an elongated non-conductive catheter into a body lumen;

advancing a conductive member longitudinally through the catheter until it emerges from the catheter, wherein the conductive member assumes a shape that contacts the walls of the body lumen; and

applying electrical energy to the conductive member such that the electrical energy is conducted along the conductive member to the wall of the body lumen.

31. The method of claim 30, wherein the conductive member comprises a memory material that assumes a non-helical shape inside the catheter and assumes a substantially helical shape after it emerges from the catheter.

32. The method of claim 31, wherein the catheter is advanced out of the catheter through a side port defined by the catheter.

33. The method of claim 31, wherein the body lumen is an aneurysm lumen.

34. The method of claim 31, wherein the conductive member comprises a proximal portion that is advanced through the catheter and a distal portion that expands to contact the wall of the lumen, wherein the distal portion comprises a plurality of longitudinally extending struts that are moved between a retracted position in which they slide through the catheter and an expanded position in which they contact the wall of the body lumen, the struts being moved between the retracted and expanded positions by longitudinal movement of the conductive member through the catheter.

35. The method of claim 31, wherein the conductive member is a conductive liquid that is forced through fluid orifices defined by the catheter and out of the catheter into contact with the walls of the body lumen.

36. A device for substantially occluding a lumen of a hollow organ of a subject, comprising:

a substantially tubular catheter comprising a nonconductive material, the catheter defining a catheter lumen in communication with both a proximal catheter opening and a distal catheter opening;

an electrode having a proximal electrode end and a distal electrode end, the electrode having a non-deployed state inside the catheter lumen in which the catheter substantially surrounds the electrode, and the electrode having a deployed state in which the distal electrode end, after being advanced through the distal catheter opening, substantially conforms to an inner surface of the hollow organ lumen; and

a source of radiofrequency energy electrically connected to the electrode and capable of delivering a therapeutically effective amount of radiofrequency energy to the electrode that is capable of substantially occluding the lumen.

37. The device of claim 36, wherein the distal catheter opening comprises at least one side hole.

38. The device of claim 36, wherein the distal catheter opening comprises at least one end hole.

39. The device of claim 36, wherein the electrode comprises a memory material that assumes a pre-selected shape when not under constraint against assuming the pre-selected shape.

40. The device of claim 36, wherein the electrode comprises an electrically conductive biocompatible liquid.

41. The device of claim 36, wherein the electrode comprises a an electrically conductive biodegradable material.

42. The device of claim 36, wherein the electrode comprises an outer coating that reduces adherence of the electrode to the inner surface of the organ.

43. The device of claim 36, wherein the distal electrode end is detachable from the proximal electrode end upon delivery of a therapeutically effective amount of energy to the electrode.

44. The device of claim 36, wherein the electrode further comprises at least two substantially coaxial sections, each of which may be advanced, retracted, or rotated independently of the other.

45. The device of claim 44, wherein the first coaxial section substantially surrounds the second coaxial section, and the second coaxial section comprises a movable core.

46. The device of claim 45, wherein two or more electrodes are attached to the movable core at a distal approximation point and are attached to the first coaxial section at a proximal approximation point, the proximal approximation point being displaced proximal to the distal approximation point.

47. The device of claim 44, wherein the size or shape of the electrodes is selectively adjustable by rotating the movable core relative to the first coaxial section.

48. The device of claim 44, wherein the size or shape of the electrodes is selectively adjustable by advancing or retracting the movable core relative to the first coaxial section.

49. The device of claim 36, further comprising a temporary lumen occluder that occludes the lumen proximal to the deployed distal electrode end.

50. The device of claim 49, further comprising a second temporary lumen occluder that occludes the lumen distal to the deployed distal electrode end.

51. The device of claim 36, further comprising a microprocessor that controls energy delivered to the electrode.

52. The device of claim 51, further comprising a thermistor, wherein the microprocessor receives temperature information from the thermistor and, based on this temperature information, adjusts wattage, frequency, duration of energy delivery, or total energy delivered to the electrode.

53. A method of delivering a radiofrequency signal to a wall of a substantially hollow organ having an inner surface, an outer surface, and a lumen substantially bounded by the inner surface, comprising:

deploying in the lumen the device of claim 1; and

delivering a therapeutically effective amount of electrical energy to the wall of the organ.

54. The method of claim 53, wherein the method is a method of substantially occluding the lumen.

55. The method of claim 53, wherein the method is a method of controlling bleeding, a method of ablating an arteriovenous malformation, a method of repairing a vascular aneurysm, a method of reducing blood supply to a tumor, or a method of ablating a varix.

56. A method of increasing the diameter of a lumen of a hollow organ within a subject, comprising:

deploying the device of claim 1 within the lumen of the hollow organ; and

delivering a therapeutically effective amount of electrical energy to the conductive member such that the lumen diameter is increased.

57. The method of claim 56, wherein the organ is an artery.

58. The method of claim 57, wherein the artery has a stenosis and the method comprises a method of reducing the stenosis.